

CLAIMS

What is claimed is:

- 1 1. A system comprising:
2 a source node configured to transmit a data packet to a target node across
3 a data network, said source node having a first retry timer set to a first retry time
4 period after which said source node will retransmit a data packet if it has not
5 received an appropriate response to said data packet; and
6 a first intermediate node electrically positioned between said source node
7 and said target node, said first intermediate node having a second retry timer set
8 to a second retry time period after which said first intermediate node will
9 retransmit said data packet if it has not received an appropriate response to said
10 data packet,
11 wherein said first retry time period is longer than said second retry time
12 period.
- 1 2. The system as in claim 1 further comprising:
2 a second intermediate node electrically positioned between first
3 intermediate node and said target node, said second intermediate node having a
4 third retry timer set to a third retry time period after which said second
5 intermediate node will retransmit said data packet if it has not received an
6 appropriate response to said data packet,
7 wherein said third retry time period is shorter than said second retry time
8 period.
- 1 3. The system of claim 2 wherein said first, second and third retry timers
2 are set by said data packet transmitted from said source node.

4. The system of claim 1 wherein said source node is configured to retransmit said data packet a first predetermined number of times if it has not received an appropriate response to said data packet.

5. The system of claim 4 wherein said intermediate node is configured to retransmit said data packet a second predetermined number of times if it has not received an appropriate response to said data packet.

6. The system of claim 5 wherein said first predetermined number of times is greater than said second predetermined number of times.

7. The system of claim 2 wherein said second intermediate node is a proxy agent and said first intermediate node is a proxy repeater.

8. A system for providing proxy communication for a standard set of network commands comprising:

a source node attaching a proxy header to a packet in which one of said standard network commands is encapsulated, said proxy header identifying an agent node,

said agent node, upon receipt of said packet with said proxy header, communicating with a target node using said standard network command.

9. The system as in claim 8 further comprising:

a first repeater node electrically positioned between said agent node and said source node, said first repeater node to forward said packet with said proxy header to said agent node.

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1 10. The system as in claim 9 wherein said first repeater node is configured
2 to remove its address from said proxy header before forwarding said packet.

1 11. The system as in claim 9 further comprising:
2 a second repeater node electrically positioned between said source node
3 and said first repeater node, said second repeater node configured to forward
4 said packet to said first repeater node.

1 12. The system as in claim 11 wherein said second repeater node is
2 configured to remove its address from said proxy header before forwarding said
3 packet on to said first repeater node.

1 13. The system as in claim 9 wherein said first repeater is further
2 configured to store address data for a return path to said source node, said
3 address data used for forwarding said target node's response to said packet.

1 14. The system as in claim 11 wherein said second repeater is further
2 configured to store address data for a return path to said source node, said
3 address data used for forwarding said target node's response to said packet.

1 15. The system as in claim 8 wherein said standard network command is
2 a request/response command.

1 16. A method for providing transaction control between a source node
2 and a target node, said source node and said target node communicating across
3 one or more repeater nodes, the method comprising:

4 transmitting a data command from said source node to a first repeater
5 node, said first repeater node configured to transmit said data command to said
6 target node;

7 retransmitting said data command from said source node to said first
8 repeater node if said source node has not received an appropriate response
9 within a first time period; and

10 retransmitting said data command from said first repeater node to said
11 target node if said first repeater node has not received an appropriate response
12 from said target node within a second time period,

13 wherein said first time period is longer than said second time period.

1 17. The method as in claim 16 further comprising:

2 transmitting said data command from said first repeater node to a second
3 repeater node, said second repeater node configured to transmit said data
4 command to said target node;

5 retransmitting said data command from said second repeater node to said
6 target node if said second repeater node has not received an appropriate
7 response to said data command within a third time period,

8 wherein said third time period is shorter than said second time period.

1 18. The method of claim 17 wherein said first, second and third time
2 periods are set by said data packet transmitted from said source node.

1 19. The system of claim 16 wherein said source node is configured to
2 retransmit said data packet to said first repeater node a first predetermined
3 number of times if it has not received an appropriate response to said data
4 packet.

1 20. The system of claim 16 wherein said first repeater node is configured
2 to retransmit said data packet to said target node a second predetermined
3 number of times if it has not received an appropriate response to said data
4 packet.

1 21. The system of claim 20 wherein said first predetermined number of
2 times is greater than said second predetermined number of times.

1 22. The system of claim 17 wherein said second repeater node is a proxy
2 agent and said first repeater node is a proxy repeater.

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